

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Comet Ridge Montana, LLC  
**Well Name/Number:** Andromeda 34-20-22-9  
**Location:** NE SE Section 22 T34N R20E  
**County:** Blaine, **MT;** **Field (or Wildcat)** Wildcat

**Air Quality**

(possible concerns)

Long drilling time: No, 10 to 14 days drilling time.

Unusually deep drilling (high horsepower rig): No, single or double drilling rig to drill to 5350' TD, Nisku Formation.

Possible H<sub>2</sub>S gas production: Slight chance H<sub>2</sub>S from Sawtooth and Madison Formations.

In/near Class I air quality area: No Class I air quality area in the area of review.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: No special concerns – using small rig to drill to 5,350' TD. If there are existing pipelines for natural gas in the area then associated gas must be tied into gathering system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system. Surface to total depth.

High water table: No high water table anticipated in the area of review.

Surface drainage leads to live water: No, closest drainages are unnamed ephemeral tributary drainages, about 1/2 of a mile to the south southwest which drains to Coal Creek, about 3/8 of a mile to the east and about 3/4 of a mile to the east which drains to Fifteen Mile Creek, from this location.

Water well contamination: No, water wells within a 1 mile radius from this location.

Porous/permeable soils: No, bentonitic clay (Gumbo) soils.

Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 350' of surface casing cemented to surface adequate to protect freshwater zones, rule 36.22.1001. Also, fresh water mud systems to be used, rule 36.22.1001. If productive, 5 1/2" production casing will be run and cemented to back to 3000'.

## Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None anticipated, crossing only ephemeral drainages.

High erosion potential: No high erosion potential at this location. Location will require a small cut, up to 2.4' and small fill, up to 4.6', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 250'X300' location size required.

Damage to improvements: Slight, surface use is prairie grassland.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other \_\_\_\_\_

Comments: Existing county road, Cherry Ridge Road and existing ranch trail will be used. About 0.15 of a mile of new access will have to be built into the location off the existing ranch trail. Cutting will be buried in the earthen pit and solidified with flyash.

Drilling fluids will be allowed to dry in the pits. Pits will be restored after they have dried.

No special concerns

## Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: No residences within a 1 mile radius of this location.

Possibility of H<sub>2</sub>S: Slight chance of H<sub>2</sub>S from Sawtooth and Madison Formations.

Size of rig/length of drilling time: Small drilling rig/short 10 to 14 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H<sub>2</sub>S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Adequate surface casing and operational BOP( Double Ram w/blinds and pipe rams), rule 36.22.1014. No concerns.

## Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No.

Conflict with game range/refuge management: None

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon and Black-footed Ferret. Candidate species are the Sprague's Pipit and the Greater Sage Grouse. NH tracker website indicates fourteen (14) species

of concern: Swift Fox, Baird's Sparrow, Sprague's Pipit, Golden Eagle, Burrowing Owl, American Bittern, Ferruginous Hawk, Chestnut Collar Longspur, Greater Sage Grouse, Black tern, Loggerhead Shrike, Long-billed Curlew, McCown's Longspur and Foster's Tern.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: \_\_\_\_\_

Comments: Private surface prairie grassland. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☒ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: \_\_\_\_\_

Comments: Private prairie grassland surface land. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Social/Economic**

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: Wildcat well test. Production not established, thus unable to determine impact. No concerns.

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### **Remarks or Special Concerns for this site**

Wildcat well test, to drill a 5350' Nisku Formation test.

### **Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected, some short term impacts will occur.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki  
(title:) Chief Field Inspector  
Date: July 12, 2013

Other Persons Contacted:  
Montana Bureau of Mines and Geology, Groundwater Information Center website.  
(Name and Agency)  
Water wells in Blaine County  
(subject discussed)  
July 12, 2013  
(date)

US Fish and Wildlife, Region 6 website  
(Name and Agency)  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA  
COUNTIES, Blaine County, Montana  
(subject discussed)  
July 12, 2013

Montana Natural Heritage Program Website  
(Name and Agency)  
Heritage State Rank= S1, S2, S3, Location T34N R20E  
(subject discussed)  
July 12, 2013  
(date)

Montana Cadastral Website  
(Name and Agency)  
Surface Ownership and surface use Section 22 T34N R20E  
(subject discussed)  
July 12, 2013  
(date)

If location was inspected before permit approval:  
Inspection date: \_\_\_\_\_  
Inspector: \_\_\_\_\_  
Others present during inspection: \_\_\_\_\_